The Type-Specimens of *Toxorhynchites* (Diptera: Culicidae)
at the National Museum of Natural History

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ABSTRACT. Data associated with 20 type-specimens of *Toxorhynchites* in the U. S. National Museum of Natural History are listed. A lectotype is designated for *Toxorhynchites herrickii* (Theobald), a synonym of *Toxorhynchites rutilus septentrionalis* (Dyar & Knab).

INTRODUCTION

The type-specimens of *Toxorhynchites* deposited in the National Museum of Natural History (USNM) were studied by the author during the summers of 1976 and 1978. The type-specimens of mosquitoes are maintained in separate cases in individual unit trays and are arranged alphabetically by species name. These specimens, plus other mosquitoes in the National Museum collection, are curated by the staff of the Medical Entomology Project (MEP).

The catalog of the mosquitoes of the world (Knight & Stone 1977), with its supplement (Knight 1978), and the publications by Belkin (1968) and Belkin et al. (1965, 1966, 1968) were of considerable aid for these type studies. I am especially indebted to the late John N. Belkin, whose friendship and many outstanding contributions to the field of mosquito systematics inspired me and many other mosquito systematists. The assistance provided by Ronald A. Ward and the staff of MEP is especially acknowledged. The staff associated with the *Toxorhynchites* project are gratefully acknowledged for their assistance, including Deborah Manning who assembled all of the original descriptions, Lawrence Mark Thomas who prepared the outline drawings, Neal L. Evenhuis who assisted in the selection of characters and design of the outline drawings, and Dorothy Hoxie and Reidun Johansen-Khan who typed and proofread the various drafts of the manuscript.

METHODS

All types examined were photographed with a Minolta SRT 101 using a 100 mm Auto Bellows lens and the 1:1 extension. The light source was a Capro

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RL80 ring flash. The 35 mm color slides provided a very useful record of color patterns, banding patterns, and other gross morphological features. All photographs were taken at a constant 1:1 ratio and could subsequently be used for verification of some morphometric details. Each type was examined for 32 male or 31 female characters. Additionally, banding patterns on the legs, abdomen, thorax, and mouthparts were illustrated on 2 pages of outline drawings. Complete label data from each examined specimen were also recorded. This multiple approach to examination of type-specimens provided very comprehensive descriptions.

The format used generally follows Belkin (1968). The specific names are arranged alphabetically. Generic and subgeneric names are abbreviated according to Reinert (1975). The source of type-material and type-localities of all nominal taxa of Toxorhynchites are discussed in Steffan (1977). General information on the type-series follows the condensed bibliographic citation for the original description. Detailed information from the labels follows. Labels are numbered consecutively from top to bottom. Each line on the label is separated by an oblique (/). Information between quotation marks (""") is handwritten, other label data are printed. The type depository (in brackets []) follows the label data. Additional comments on the type-series follows.

LIST OF NOMINAL TAXA

Genus Toxorhynchites Theobald

Subgenus Lynchiella Lahille


U.S.N.M. [red label]; 5. "Megarhinus/haitiensis/D&K" [USNM]. Belkin, Schick & Heinemann (1965:17) add some additional notes on the type series. "Type from larva in 'hollow tree,' others in type series from 'hollow palm trunk' (123.1), hollow immortelle tree (139.1), hollow tree (144.1, 144.2)."

TX. (Lyn.) herrickii (Theobald 1906:241; Megarhinus). The description of this species by Theobald was based on Herrick's (1905:281-282) description of Megarhinus portoricensis collected at Agricultural College, Mississippi, 1905. Herrick based his comments on M. portoricensis on 3 adult males reared from larvae collected in "the cup-like bottom of a massive iron post supporting one corner of a large water tank." He discussed differences between these specimens and Theobald's description of M. portoricensis (Theobald 1901:232), and illustrated the larva and portions of the pupa and adult. Theobald (1906) based his description of M. herrickii on these published comments and apparently did not see the specimens (Belkin 1968:33). Belkin (1968) suggested that a lectotype should be designated from specimens in the National Museum collection. LECTOTYPE ♀ by present designation. Labels: 1. W. V. Reed/"A.C." Miss./"9-26-" 190 "5"; 2. "5493"; 3. "493/Megarhinus portoricensis/Agri. Coll. Miss./9-26-05/W.V. Reed/See card 493" [on folded microscope slide label]; 4. "383/Uranotaenia/ sapharina/A.C. 9-11-05/W.V. Reed/383" [on folded microscope slide label]; 5. Type/No. "76798"/U.S.N.M. [red label] [USNM].


TX. (Lyn.) septentrionalis (Dyar & Knab 1906:249-251; Megarhinus). Described from a series of 13 ♂ and 11 ♀ from Virginia, West Virginia, Maryland, North Carolina, Mississippi, Missouri and "India Territory." HOLOTYPE ♂, with
genitalia on slide [see Stone & Knight 1957:199]. Labels: 1. Woodstock/"iss. 24 Aug 04" VA; 2. F.C. Pratt/Collector; 3. Type/No. "9952"/U.S.N.M. [red label]; 4. "Megarhinus/septentrionalis/D.&K." [USNM]. A slide-mounted pupal skin was found in the slide collection at the USNM with the following label and is presumed to be the associated skin of the holotype: "Megarhinus/SEPT. σ/pupated Aug. 20'04/issued Aug. 24'04/Woodstock, Va/in Tree Stump (Pratt)." This pupal skin is illustrated by Steffan & Evenhuis (1980).


**Subgenus Toxorhynchites** Theobald


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**TX. (Tox.) lewallii** (Ludlow 1904:233-234; *Megarhinus*). Described from unique HOLOTYPE ♂. Labels: 1. Type No./"27784"/U.S.N.M.; 2. "Toxorhynchites/lewallii/Lud./Fort Mills/Corregidor/Dec." [USNM]. The label data disagree with the published data, which give the type locality as Salog [Guimaras Island], Philippines. Dr. Ronald A. Ward (pers. commun.) suggested that the specimen may have been incorrectly labeled by Shannon. Dyar & Shannon (1925:67) discuss Ludlow's types and apparently labeled some of the types.


**TX. (Tox.) sunthorni** Thurman 1959:19-20. Described from a unique HOLOTYPE ♂, resting on a tree trunk. Labels: 1. "Doi Chom Cheng"/Chieng Mai Prv/Thailand/"4. April 1952"; 2. "Ernestine B &'/DCThurman Jr/Collr. "182"; 3. Type No./"64219"/U.S.N.M. [red label]; 3. "Toxorhynchites/sunthorni"/det/ETHrman 195"8"/"Holotype"/[U.S.N.M.]. All legs are off the specimen; only the hindleg is intact and mounted on a card below the specimens, fragments of other legs are also mounted on the card. The specimen was collected at an elevation of 3000 feet.


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